#7

RAW SEQUENCE LISTING   DATE: 07/15/2002
PATENT APPLICATION: US/10/026,188   TIME: 13:55:39

Input Set : A:\Ucl149-1.app
Output Set: N:\CRF3\07152002\J026188.raw

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 4 <110> APPLICANT: Zuker, Charles S.
 5        Zhang, Yifeng
 6        The Regents of the University of California
 8 <120> TITLE OF INVENTION: Assays for Taste Receptor Cell Specific
 9        Ion Channel
11 <130> FILE REFERENCE: 02307E-114910US
13 <140> CURRENT APPLICATION NUMBER: US 10/026,188
14 <141> CURRENT FILING DATE: 2001-12-21
16 <150> PRIOR APPLICATION NUMBER: US 60/259,379
17 <151> PRIOR FILING DATE: 2000-12-29
19 <160> NUMBER OF SEQ ID NOS: 8
21 <170> SOFTWARE: FastSEQ for Windows Version 3.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 4185
25 <212> TYPE: DNA
26 <213> ORGANISM: Rattus sp.
28 <220> FEATURE:
29 <223> OTHER INFORMATION: rat L-TRP taste cDNA
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33   gtcacaatgc cgatggccca gagctcttgt cctggaagcc ccccagatac tggggatgga     120
34   tgggagccag tcctatgcaa gggagaggtc aacttcggag ggtctgggaa aaagcgaagc     180
35   aagtttgtga aggtgccaag caatgtggcc ccctccatgc tctttgaact cctgctcacc     240
36   gagtggcacc tgccagcccc caacctggtg gtgtccctgg tgggcgagga acggcttttt     300
37   gctatgaagt cctggcttcg ggatgtcttg cgcaaggggc tggtgaaagc agctcagagc     360
38   acaggtgcct ggatcctgac cagtgccctc catgtgggcc tggcacgcca tgttggacag     420
39   gctgtacgtg atcactctct ggctagcacg tccaccaagg tccgtgtggt ggccatcgga     480
40   atggcctctc tggaccgaat ccttcaccgc caacttctag atggtgtcca ggaggatact     540
41   cccatccact acccagcaga tgagggcagc actcagggac ccctctgccc tctggacagc     600
42   aatctctccc acttcatcct cgtggagcca ggcacccttg ggagtgggaa cgacggactg     660
43   gcagagctgc agctgagcct ggagaagcac atctctcagc agaggacagg ttatggggt      720
44   accagcagca tccagatacc tgtcctttgc ttgctagtca atggtgaccc cagcacccta     780
45   gagaggatgt ccagggcagt ggagcaggct gccccatggc tgatcctggc aggttctggg     840
46   ggcattgctg atgtactcgc tgccctggtg ggccagcctc atctcctggt gccccaggtg     900
47   accgagaagc agttcagaga gaaattccca agcgagtgtt tctcttggga agccattgta     960
48   cactggacag agctgctaca gaacattgct gcacacccc acctgctcac agtgtacgac    1020
49   tttgagcagg agggttccga ggacctggac accgtcatcc tcaaggcact tgtgaaagcc    1080
50   tgcaagagtc acagccgaga cgcacaagac tacctagatg agctcaagtt agcagtggcc    1140
51   tgggatcgcg tggacattgc caagagtgaa atcttcaatg gggacgtgga gtggaagtcc    1200
52   tgtgacttgg aagaggtgat gacagatgcc ctagtgagca caagcctga cttcgtgcgc    1260
53   ctctttgtgg acagtggtgc tgacatggcc gagttcttga cctatgggcg gctgcagcag    1320
54·  ctttaccact ctgtgtcccc caagagcctc ctctttgaac tgctggagcg taagcatgag    1380
55   gagggtcggc tgacactggc tggcctgggt gcccagcaga cccggaagct gcccgttggt    1440
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 56  ctgcctgcct tttcactcca tgaggtctcc cgagttctca aagatttcct gcatgacgcc    1500
 57  tgccgtggct tctaccagga tgggcgcagg atggagaaga gagggccacc caagcggcct    1560
 58  gcaggccaga aatggctgcc ggacctcagt cggaagagtg aagacccatg gagggacctg    1620
 59  ttcctttggg ctgtgctgca gaaccgttat gagatggcca catacttctg ggccatgggc    1680
 60  cgggagggtg tggctgctgc tctggcggcc tgcaagatca tcaaggaaat gtcccacctg    1740
 61  gagaaagagg cagaggtggc ccgcactatg cgtgaggcca agtatgagca gctggccctc    1800
 62  gatcttttct cagagtgcta cagcaacagt gaggaccgtg cctttgccct gttggtgcgc    1860
 63  aggaaccaca gctggagcag gaccacctgc ctgcacctgg ccactgaggc cgatgccaag    1920
 64  gccttctttg cccatgatgg tgtgcaagca ttcctgacga agatctggtg gggagacatg    1980
 65  gccacaggca cacccatctt acgacttctg ggtgccttca cctgcccagc cctcatctac    2040
 66  acaaatctca tctccttcag tgaggatgcc ccgcagagga tggacctgga agatctgcag    2100
 67  gagccagaca gtttggatat ggaaaagagc ttcctgtgca gccatggtgg ccaattggag    2160
 68  aagttaacag aggcgccaag ggctcctggc gatctaggcc cacaagctgc cttcctgctc    2220
 69  acacggtgga ggaagttctg gggcgctcct gtgactgtgt tcttggggaa tgtggtcatg    2280
 70  tactttgcat tcctcttcct attctcctac gtcctgctgg tggatttcag gccaccaccc    2340
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 73  tacgtagaag acaactggaa caaatgtgac atggtggcca tcttcctgtt cattgttggt    2520
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 75  ttcatggtgt tcacacttcg gctcatccac atctttgcta ttcacaagca gctgggtcct    2640
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 78  ctggagtgga tttttccgccg tgtgctctac aggccttacc tgcagatctt tgggcaaatc    2820
 79  cctctggatg aaattgatga ggcccgtgtg aactgctctc ttcacccgtt gctgctggac    2880
 80  agctcagctt cctgccctaa tctctatgcc aactggctgg tcattctcct gctggttacc    2940
 81  ttcctcctcg tcactaatgt gctacttatg aaccttctga tcgccatgtt cagctacaca    3000
 82  ttccaggtgg tgcagggcaa tgcagacatg ttctggaagt ttcaacgcta ccacctcatc    3060
 83  gttgaatacc acggaaggcc ggctctggcc ccgcccttca tcctgctcag ccacctgagc    3120
 84  ctggtgctca agcaggtctt caggaaggaa gcccagcaca aacagcaaca cctggagaga    3180
 85  gacttgcctg accccgtgga ccagaagatc attacctggg aaacagttca aaaggagaac    3240
 86  ttcctgagta ccatggagaa acggaggagg gacagtgaga aggaggtgct gaggaaaacg    3300
 87  gcacacagag tggacttgat tgccaaatac atcggggggtc tgagagagca agaaaagagg    3360
 88  atcaagtgtc tggagtcaca ggccaactac tgtatgctcc tcttgtcctc catgactgac    3420
 89  acactggctc ctggaggcac ctactcaagt tctcaaaact gtggtcgcag gagtcagcca    3480
 90  gcctctgcta gagacaggga gtacctagag gctggcttgc cacactcaga cacctgaaat    3540
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 92  accttcccct gcccccagca gccccgagac cttgccgcag accatgtctt ggacacctct    3660
 93  tcctatgaaa atgagactca tgtctttggc atctatctgg gagccccagg cgtcctctcc    3720
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 95  gaactggcca agtcccacat gggataccat ctgcctggat ggggctactt acgtctagcc    3840
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 97  ctctgatcca tccatcagcc gaccagcttc tagagggcag gactcagatc tactgtaatc    3960
 98  agctcccatc cttcagcccc cacagcataa tttgtgtgat tgtcctggca caaaccccaa    4020
 99  gatactgctc aagggtaccc aatgctattt tactttctat aaagcctgta gaccacctca    4080
100  actaagctaa actggaccac aggggtggct aaaccaacat ttcaaacacc tggggaacat     4140
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103 <210> SEQ ID NO: 2
104 <211> LENGTH: 1165
105 <212> TYPE: PRT
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Input Set : A:\Uc1149-1.app
Output Set: N:\CRF3\07152002\J026188.raw

106 <213> ORGANISM: Rattus sp.
108 <220> FEATURE:
109 <223> OTHER INFORMATION: rat L-TRP taste predicted protein
111 <400> SEQUENCE: 2
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114 Pro Gly Ser Pro Pro Asp Thr Gly Asp Gly Trp Glu Pro Val Leu Cys
115   20   25   30
116 Lys Gly Glu Val Asn Phe Gly Gly Ser Gly Lys Lys Arg Ser Lys Phe
117   35   40   45
118 Val Lys Val Pro Ser Asn Val Ala Pro Ser Met Leu Phe Glu Leu Leu
119   50   55   60
120 Leu Thr Glu Trp His Leu Pro Ala Pro Asn Leu Val Val Ser Leu Val
121 65   70   75   80
122 Gly Glu Glu Arg Leu Phe Ala Met Lys Ser Trp Leu Arg Asp Val Leu
123   85   90   95
124 Arg Lys Gly Leu Val Lys Ala Ala Gln Ser Thr Gly Ala Trp Ile Leu
125   100   105   110
126 Thr Ser Ala Leu His Val Gly Leu Ala Arg His Val Gly Gln Ala Val
127   115   120   125
128 Arg Asp His Ser Leu Ala Ser Thr Ser Thr Lys Val Arg Val Val Ala
129   130   135   140
130 Ile Gly Met Ala Ser Leu Asp Arg Ile Leu His Arg Gln Leu Leu Asp
131 145   150   155   160
132 Gly Val Gln Glu Asp Thr Pro Ile His Tyr Pro Ala Asp Glu Gly Ser
133   165   170   175
134 Thr Gln Gly Pro Leu Cys Pro Leu Asp Ser Asn Leu Ser His Phe Ile
135   180   185   190
136 Leu Val Glu Pro Gly Thr Leu Gly Ser Gly Asn Asp Gly Leu Ala Glu
137   195   200   205
138 Leu Gln Leu Ser Leu Glu Lys His Ile Ser Gln Gln Arg Thr Gly Tyr
139   210   215   220
140 Gly Gly Thr Ser Ser Ile Gln Ile Pro Val Leu Cys Leu Leu Val Asn
141 225   230   235   240
142 Gly Asp Pro Ser Thr Leu Glu Arg Met Ser Arg Ala Val Glu Gln Ala
143   245   250   255
144 Ala Pro Trp Leu Ile Leu Ala Gly Ser Gly Gly Ile Ala Asp Val Leu
145   260   265   270
146 Ala Ala Leu Val Gly Gln Pro His Leu Leu Val Pro Gln Val Thr Glu
147   275   280   285
148 Lys Gln Phe Arg Glu Lys Phe Pro Ser Glu Cys Phe Ser Trp Glu Ala
149   290   295   300
150 Ile Val His Trp Thr Glu Leu Leu Gln Asn Ile Ala Ala His Pro His
151 305   310   315   320
152 Leu Leu Thr Val Tyr Asp Phe Glu Gln Glu Gly Ser Glu Asp Leu Asp
153   325   330   335
154 Thr Val Ile Leu Lys Ala Leu Val Lys Ala Cys Lys Ser His Ser Arg
155   340   345   350
156 Asp Ala Gln Asp Tyr Leu Asp Glu Leu Lys Leu Ala Val Ala Trp Asp

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157           355              360              365
158 Arg Val Asp Ile Ala Lys Ser Glu Ile Phe Asn Gly Asp Val Glu Trp
159     370              375              380
160 Lys Ser Cys Asp Leu Glu Glu Val Met Thr Asp Ala Leu Val Ser Asn
161 385              390              395              400
162 Lys Pro Asp Phe Val Arg Leu Phe Val Asp Ser Gly Ala Asp Met Ala
163         405              410              415
164 Glu Phe Leu Thr Tyr Gly Arg Leu Gln Gln Leu Tyr His Ser Val Ser
165         420              425              430
166 Pro Lys Ser Leu Leu Phe Glu Leu Leu Glu Arg Lys His Glu Glu Gly
167         435              440              445
168 Arg Leu Thr Leu Ala Gly Leu Gly Ala Gln Gln Thr Arg Lys Leu Pro
169     450              455              460
170 Val Gly Leu Pro Ala Phe Ser Leu His Glu Val Ser Arg Val Leu Lys
171 465              470              475              480
172 Asp Phe Leu His Asp Ala Cys Arg Gly Phe Tyr Gln Asp Gly Arg Arg
173         485              490              495
174 Met Glu Lys Arg Gly Pro Pro Lys Arg Pro Ala Gly Gln Lys Trp Leu
175         500              505              510
176 Pro Asp Leu Ser Arg Lys Ser Glu Asp Pro Trp Arg Asp Leu Phe Leu
177     515              520              525
178 Trp Ala Val Leu Gln Asn Arg Tyr Glu Met Ala Thr Tyr Phe Trp Ala
179     530              535              540
180 Met Gly Arg Glu Gly Val Ala Ala Ala Leu Ala Ala Cys Lys Ile Ile
181 545              550              555              560
182 Lys Glu Met Ser His Leu Glu Lys Glu Ala Glu Val Ala Arg Thr Met
183         565              570              575
184 Arg Glu Ala Lys Tyr Glu Gln Leu Ala Leu Asp Leu Phe Ser Glu Cys
185         580              585              590
186 Tyr Ser Asn Ser Glu Asp Arg Ala Phe Ala Leu Leu Val Arg Arg Asn
187     595              600              605
188 His Ser Trp Ser Arg Thr Thr Cys Leu His Leu Ala Thr Glu Ala Asp
189     610              615              620
190 Ala Lys Ala Phe Phe Ala His Asp Gly Val Gln Ala Phe Leu Thr Lys
191 625              630              635              640
192 Ile Trp Trp Gly Asp Met Ala Thr Gly Thr Pro Ile Leu Arg Leu Leu
193         645              650              655
194 Gly Ala Phe Thr Cys Pro Ala Leu Ile Tyr Thr Asn Leu Ile Ser Phe
195         660              665              670
196 Ser Glu Asp Ala Pro Gln Arg Met Asp Leu Glu Asp Leu Gln Glu Pro
197     675              680              685
198 Asp Ser Leu Asp Met Glu Lys Ser Phe Leu Cys Ser His Gly Gly Gln
199     690              695              700
200 Leu Glu Lys Leu Thr Glu Ala Pro Arg Ala Pro Gly Asp Leu Gly Pro
201 705              710              715              720
202 Gln Ala Ala Phe Leu Leu Thr Arg Trp Arg Lys Phe Trp Gly Ala Pro
203         725              730              735
204 Val Thr Val Phe Leu Gly Asn Val Val Met Tyr Phe Ala Phe Leu Phe
205         740              745              750
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PATENT APPLICATION: US/10/026,188   TIME: 13:55:39

Input Set : A:\Uc1149-1.app
Output Set: N:\CRF3\07152002\J026188.raw

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206  Leu Phe Ser Tyr Val Leu Leu Val Asp Phe Arg Pro Pro Pro Gln Gly
207          755             760             765
208  Pro Ser Gly Ser Glu Val Thr Leu Tyr Phe Trp Val Phe Thr Leu Val
209      770             775             780
210  Leu Glu Glu Ile Arg Gln Gly Phe Phe Thr Asn Glu Asp Thr Arg Leu
211  785             790             795                 800
212  Val Lys Lys Phe Thr Leu Tyr Val Glu Asp Asn Trp Asn Lys Cys Asp
213              805             810             815
214  Met Val Ala Ile Phe Leu Phe Ile Val Gly Val Thr Cys Arg Met Val
215              820             825             830
216  Pro Ser Val Phe Glu Ala Gly Arg Thr Val Leu Ala Ile Asp Phe Met
217          835             840             845
218  Val Phe Thr Leu Arg Leu Ile His Ile Phe Ala Ile His Lys Gln Leu
219      850             855             860
220  Gly Pro Lys Ile Ile Ile Val Glu Arg Met Met Lys Asp Val Phe Phe
221  865             870             875                 880
222  Phe Leu Phe Phe Leu Ser Val Trp Leu Val Ala Tyr Gly Val Thr Thr
223              885             890             895
224  Gln Ala Leu Leu Asp Pro His Asp Gly Arg Leu Glu Trp Ile Phe Arg
225          900             905             910
226  Arg Val Leu Tyr Arg Pro Tyr Leu Gln Ile Phe Gly Gln Ile Pro Leu
227      915             920             925
228  Asp Glu Ile Asp Glu Ala Arg Val Asn Cys Ser Leu His Pro Leu Leu
229      930             935             940
230  Leu Asp Ser Ser Ala Ser Cys Pro Asn Leu Tyr Ala Asn Trp Leu Val
231  945             950             955                 960
232  Ile Leu Leu Leu Val Thr Phe Leu Leu Val Thr Asn Val Leu Leu Met
233              965             970             975
234  Asn Leu Leu Ile Ala Met Phe Ser Tyr Thr Phe Gln Val Val Gln Gly
235              980             985             990
236  Asn Ala Asp Met Phe Trp Lys Phe Gln Arg Tyr His Leu Ile Val Glu
237          995             1000            1005
238  Tyr His Gly Arg Pro Ala Leu Ala Pro Pro Phe Ile Leu Leu Ser His
239      1010            1015            1020
240  Leu Ser Leu Val Leu Lys Gln Val Phe Arg Lys Glu Ala Gln His Lys
241  1025            1030            1035                1040
242  Gln Gln His Leu Glu Arg Asp Leu Pro Asp Pro Val Asp Gln Lys Ile
243              1045            1050            1055
244  Ile Thr Trp Glu Thr Val Gln Lys Glu Asn Phe Leu Ser Thr Met Glu
245              1060            1065            1070
246  Lys Arg Arg Arg Asp Ser Glu Lys Glu Val Leu Arg Lys Thr Ala His
247          1075            1080            1085
248  Arg Val Asp Leu Ile Ala Lys Tyr Ile Gly Gly Leu Arg Glu Gln Glu
249      1090            1095            1100
250  Lys Arg Ile Lys Cys Leu Glu Ser Gln Ala Asn Tyr Cys Met Leu Leu
251  1105            1110            1115                1120
252  Leu Ser Ser Met Thr Asp Thr Leu Ala Pro Gly Gly Thr Tyr Ser Ser
253              1125            1130            1135
254  Ser Gln Asn Cys Gly Arg Arg Ser Gln Pro Ala Ser Ala Arg Asp Arg
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Input Set : **A:\Ucl149-1.app**
Output Set: **N:\CRF3\07152002\J026188.raw**